



Amendments to the Claims

1. (currently amended) A computer-implemented method for providing a recommendation list from a plurality of items, comprising the steps of:

specifying receiving an adaptable constraint filter to apply to recommendation requests ~~having a first set of attributes~~, wherein the adaptable constraint includes a plurality of free variables defined by a user ~~recommendation requests comprise requests from a plurality of users;~~

receiving a plurality of values for at least one of the plurality of free variables in the adaptable constraint;

binding the received values to the corresponding free variable to update the adaptable constraint for future recommendation requests;

receiving a recommendation request identifying at least one of the free variables in the updated adaptable constraint having the first set of attributes;

selecting the ones of the plurality of items that satisfy the updated adaptable constraint ~~filter associated with~~ for the recommendation request;

computing a predicted value based on a recommendation filter, for each of the selected ones of the items; and

appending the selected ones of the items meeting predetermined criteria to generate the recommendation list; and

transmitting the generated list to the user for presentation on a device.

2. (original) The method of claim 1, wherein appending selected ones of the items further includes appending the selected ones of the items to the recommendation list when the predicted value exceeds a predetermined number.

3. (original) The method of claim 1, wherein appending selected ones of the items further includes appending a predetermined number of items to the list.

4-5. (canceled).

6. (previously presented) The method of claim 1, wherein selecting the ones of the items that satisfy the constraint filter further includes applying a constraint including a Boolean expression.

7. (previously presented) The method of claim 1, wherein selecting the ones of the items that satisfy the constraint filter further includes applying a constraint to the ones of the items, wherein the constraint includes an equality expression.

8. (previously presented) The method of claim 1, wherein selecting the ones of the items that satisfy the constraint filter further includes applying a constraint to the ones of the items, wherein the constraint includes a category membership expression.

9. (original) The method of claim 1, wherein computing the predicted value further includes evaluating the selected ones of the items with collaborative filtering.

10. (previously presented) The method of claim 3, further comprising the step of:
truncating the recommendation list when the predetermined number of the selected ones of the items on the recommendation list has been met.

11. (canceled)

12. (previously presented) The method of claim 1, wherein specifying the adaptable constraint filter further includes:
obtaining a constraint; and
storing the constraint in memory.

13-15. (canceled)

16. (currently amended) An apparatus for providing a recommendation list from a plurality of items in a data processing system, comprising:
a processing component configured to process instructions for selecting items from the plurality of items, wherein the processing component includes:

a constraint filter including at least one constraint having a plurality of free variables defined by a user, wherein at least one free variable has a plurality of values defined by the user;

a recommendation filter; and

means for determining an order for invoking the constraint filter and the recommendation filter; ~~and~~

an input component configured to receive a recommendation request identifying at least one of the free variables in a constraint;

a recommender component configured to generate ~~append the selected items to~~ a recommendation list based on the constraint filter and the recommendation filter ;
and

means for transmitting the generated list to a user for presentation on a device.

17. (previously presented) The apparatus of claim 16, wherein the processing component further includes means for computing predicted values based on the recommendation filter.

18. (previously presented) The apparatus of claim 16, wherein means for determining an order for invoking the constraint filter includes means for the order of the filters to apply to the plurality of the items based on the cost of the filters; and

wherein the processing component further includes:

means for applying the constraint filter first when it is determined that the cost of the constraint filter is lower than the cost of the recommendation filter, and

means for applying the recommendation filter first when it is determined that the cost of the recommendation filter is lower than the cost of the constraint filter.

19-20. (canceled)

21. (currently amended) The apparatus of claim 16 ~~[[38]]~~, wherein the at least one constraint includes a boolean expression.

22. (currently amended) The apparatus of claim 16 ~~[[38]]~~, wherein the at least one constraint includes a category membership expression.

23. (currently amended) The apparatus of claim 16 ~~[[38]]~~, wherein the at least one constraint includes an equality expression.

24. (currently amended) The apparatus of claim 16, wherein the ~~the~~ recommendation filter includes a collaborative filtering module that computes predicted values by evaluating ones of the plurality of items.

25. (original) The apparatus of claim 16, wherein the recommender component is further configured to truncate the recommendation list when a predetermined number of the ones of the items on the recommendation list has been met.

26. (previously presented) The apparatus of claim 16, further comprising an input component configured to:

obtain a constraint; and
store the constraint in a memory.

27. (canceled)

28. (previously presented) The apparatus of claim 16, wherein the processing component is further configured to adaptively specify the constraint filter, using a set of constraint-forming rules.

29. (currently amended) A computer-implemented method of generating recommendation lists from a plurality of items having assigned category memberships representing attributes of the items, comprising:

receiving a plurality of recommendation requests ~~[[,]] wherein the recommendation requests comprise requests from a plurality of users;~~

applying, for each recommendation request, a series of filters to each of the items, the series comprising a constraint filter and a recommendation filter for furnishing a predicted rating value, wherein the constraint filter is selected based on attributes associated with the recommendation request , wherein the constraint filter has a plurality

of free variables defined by a user, and at least one free variable has a plurality of values defined by the user; and

generating, for each recommendation request, a recommendation list based on the predicted rating value for the item that passes [[pass]] the constraint filter and the recommendation filter ; and

for each recommendation request, transmitting the generated list to a user for presentation on a device.

30. (previously presented) The method of claim 29 further comprising:
building a constraint using constraint forming rules; and
incorporating the constraint into the constraint filter.

31. (previously presented) The method of claim 29 wherein the applying step comprises:

determining a lowest cost order of applying the constraint filter and the recommendation filter; and

applying the constraint filter and the recommendation filter in the lowest cost order.

32. (previously presented) The method of claim 31 wherein the order determining step comprises:

determining a cost for a first order, the first order being applying the constraint filter before applying the recommendation filter;

determining a cost for a second order, the second order being applying the recommendation filter before applying the constraint filter; and

establishing one of the first and second orders as the lowest cost order based on the respective costs thereof.

33. (previously presented) The method of claim 29 wherein the recommendation generating step comprises generating a list of recommendations based on predicted rating values of the items that pass the constraint filter and the recommendation filter being in excess of a specified rating value.

34. (previously presented) The method of claim 29 wherein the recommendation generating step comprises generating a list of recommendations based on a specified number of the items that pass the constraint filter and the recommendation filter with highest predicted rating values.

35. (currently amended) A method of generating a recommendation from a plurality of items having assigned category memberships representing attributes of the items, comprising:

building a constraint to apply to recommendation requests ~~having a first set of attributes using constraint forming rules, wherein the~~ constraint includes a plurality of free variables defined by a user ~~recommendation requests include requests from a plurality of users;~~

receiving a plurality of values for at least one of the plurality of free variables in the constraint;

binding the received values to the corresponding free variable to update the constraint for future recommendation requests;

incorporating the constraint into a constraint filter;

receiving a recommendation request identifying at least one of the free variables in the adaptable constraint ~~having the first set of attributes;~~

applying a series of filters to each of the plurality of items in response to the recommendation request, the series comprising a recommendation filter for furnishing a predicted rating value, and the updated constraint filter; ~~and~~

generating a recommendation based on the predicted rating value or values for the item or items that pass the constraint filter and the recommendation filter ; and

transmitting the recommendation to the user for presentation on a device.

36. (currently amended) A method of generating a recommendation list from a plurality of items having assigned category memberships representing attributes of the items, comprising:

building a constraint using constraint forming rules , wherein the constraint includes a plurality of free variables defined by a user;

receiving a plurality of values for at least one of the plurality of free variables in the constraint;

binding the received values to the corresponding free variable to update the constraint for future recommendation requests;

incorporating the constraint into a constraint filter;

receiving a recommendation request identifying at least one of the free variables in the adaptable constraint;

determining a cost for a first order, the first order being applying the constraint filter before applying the recommendation filter;

determining a cost for a second order, the second order being applying the recommendation filter before applying the constraint filter;

establishing one of the first and second orders as the lowest cost order based on the respective costs thereof;

applying a series of filters to each of the plurality of items in response to the recommendation request, the series comprising the recommendation filter and the updated constraint filter in the lowest cost order; and

generating a list of recommendations based on the predicted rating values for the items that pass the constraint filter and the recommendation filter ; and

transmitting the generated list to the user for presentation on a device.

37- 38. (canceled)